

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RAYMOND DUBOUIS

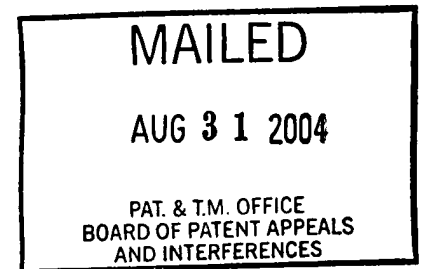
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Appeal No. 2004-0806  
Application No. 09/331,959

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HEARD: AUGUST 19, 2004

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Before GARRIS, PAK, and DELMENDO, *Administrative Patent Judges*.  
PAK, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 21, which are all of the claims pending in the above-identified application.

The subject matter on appeal is directed to a composition and a method for "enhancing the arc-tracking and arc-erosion resistance properties of an article . . . ." See claims 1 and 11. The composition includes a polyorganosiloxane composition and various mixtures, such as a mixture of a platinum complex or

compound and cerium (IV) oxides and/or hydroxide, or a mixture of a platinum compound or complex and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ). See claim 1. The method involves "incorporating an effective amount of the composition . . . into said article." See claim 11.

According to page 1, line 18, to page 2, line 2, of the specification:

The expression "arc-tracking and arc-erosion resistance properties" should be understood to mean those properties of this type of silicone elastomer obtained by crosslinking so-called RTV, LSR, polyaddition EVC or EVC polyorganosiloxane compositions.

The expression "RTV", "LSR" and "EVC" are well known to those skilled in the art; RTV is the abbreviation for "Room Temperature Vulcanizing", LSR is the abbreviation for "Liquid Silicone Rubber" and EVC is the abbreviation for "Elastomère Vulcanisable à Chaud" [*Hot Vulcanizing Elastomer*].

Further details of the appealed subject matter are recited in representative claims 1 and 11<sup>1</sup> which are reproduced below:

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<sup>1</sup> The appellant initially grouped the claims on appeal as follows (Brief, page 4):

Group I: Claims 1-10, 12-15, 16, 18 and 20[; and]  
Group II: Claims 11, 17, 19 and 21.

The appellant then corrects the grouping of the claims on appeal as follows (Reply Brief, page 1):

Group I: Claims 1, 9-10, 12, 15-16, 18 and 20; and  
Group II: Claims 2-8, 11, 13-14, 17, 19 and 21.

1. A composition for enhancing the arc-tracking and arc-erosion resistance properties of an article comprising:

an effective amount of a mixture A, B or C formed from:

in regard to mixture A, constituents A1 + A3 where constituent A1 is platinum in the form of a platinum complex or compound and constituent A3 consists of a combination of FeO and Fe<sub>2</sub>O<sub>3</sub>;

in regard to mixture B, mixture B consisting of at least one of: constituents B1 + B2 where constituent B1 has the meaning of constituent A1 and constituent B2 comprises cerium (IV) oxide and/or hydroxide; and

constituents B1 + B3 where constituent B1 has the meaning of constituent A1 and constituent B3 has the meaning of a combination of cerium (IV) oxide and/or hydroxide and titanium oxide TiO<sub>2</sub>; or

in regard to mixture C, constituents C1 + C2 where constituent C1 has the meaning of constituent A1 and constituent C2 consists of a combination of constituent B3 and constituent A3;

in constituent A3, the ratio of the amount by weight of FeO to that of Fe<sub>2</sub>O<sub>3</sub> lies within the range going from 0.1:1 to 9:1;

in constituent B3, the ratio of the amount by weight of cerium (IV) oxide and/or hydroxide to that of TiO<sub>2</sub> lies within the range going from 0.6:1 to 6:1;

in constituent C2, the ratio of the amount by weight of constituent A3 to that of constituent B3 lies within the range going from 0.02:1 to 1:1;

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Therefore, for purposes of this appeal, we select claims 1 and 11 as representative of all of the claims on appeal and decide the propriety of the examiner's section 103 rejections below based on these claims alone consistent with the requirements of 37 CFR § 1.192(c) (7) (2003).

in a polyorganosiloxane composition D comprising an alkenylsilyl group-carrying constituent and a hydrosilyl group-carrying constituent, either crosslinkable at room temperature or with the heat from polyaddition reactions in the presence of a platinum catalyst by reactions between the alkenylsilyl and hydrosilyl groups; and

the amounts of the various constituents A1, A3, B1, B2, B3, C1 and C2 lie within the ranges mentioned below;

the amount of platinum, expressed in parts by weight of elemental platinum, lies within the range going from 1 to 250 ppm with respect to the total weight of the polyorganosiloxane constituent(s) of the curable compositions D; and

the amounts of constituents A3, B2, B3 and C2 of mixtures A, B and C, expressed in parts by weight of the constituent, lie within the range going from 0.5 to 30 parts by weight per 100 parts of the polyorganosiloxane constituent(s) of the curable compositions D.

11. A method for enhancing the arc-tracking and arc-erosion resistance properties of an article, comprising incorporating an effective amount of the composition of claim 1 into said article.

The prior art references relied upon by the examiner are:

Matsushita	4,110,300	Aug. 29, 1978
Takita et al. (Takita)	5,543,450	Aug. 6, 1996
Hatanaka et al. (Hatanaka)	50-97644	Aug. 2, 1975
(Published Japanese Kokai Patent Application) <sup>2</sup>		

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<sup>2</sup> Our reference to this published Japanese patent application is to the corresponding English translation of record.

Claims 1 through 21 stand rejected under 35 U.S.C. § 103 as unpatentable over the disclosure of Takita. Claims 1 through 21 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Hatanaka and Matsushita.

We have reviewed the claims, specification and applied prior art references, including all of the arguments and evidence advanced by both the examiner and the appellant in support of their respective positions. This review has led us to conclude that the examiner's Section 103 rejections are well founded. Accordingly, we affirm the examiner's Section 103 rejections essentially for those factual findings and conclusions set forth in the Answer. We add the following primarily for emphasis and completeness.

We find that both Takita and Matsushita disclose a self-extinguishing or nonflammable silicone rubber (vulcanized) compositions. See the abstracts of Takita and Matsushita. To render silicone elastomer or rubber compositions nonflammable or self-extinguishable, both Takita and Matsushita exemplify, *inter alia*, adding the claimed amounts of nonflammable or self-extinguishing (flame retardant) agents, such as chloroplatinic

acid and cerium oxide<sup>3</sup> or chloroplatinic acid and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ), to the claimed amount of polyorganosiloxane compositions. See Takita, column 6, Table 1, Examples 1 and 2 and column 7, Table 2, Examples 1 and 3-6, together with column 1, lines 12-26 and column 2, lines 15-44 and Matsushita, column 6, Table 1, Comparative Examples 103 and 104, together with column 1, lines 5-22 and column 2, line 19 to column 3, line 40. Although the exemplified polyorganosiloxane compositions are not directed to those containing both an alkenylsilyl group-carrying constituent and a hydrosilyl group-carrying constituent, both Takita and Matsushita teach that such compositions can be used to form nonflammable or self-extinguishable silicone elastomer or rubber compositions. See Takita, column 5, lines 3-10 and column 2, lines 55-65, and Matsushita, column 2, lines 19-40 and column 4, line 67 to column 5, line 7. Compare the Answer, pages 3 and 4 with the Brief and the Reply Brief in their entirety. The resulting compositions, according to Takita and Matsushita, are molded to form an article. See Takita, column 4, lines 52-58 and Matsushita, column 1, line 58. Hatanaka, like Matsushita and/or

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<sup>3</sup>The appellant has not argued that Takita's cerium oxide does not correspond to or does not include the claimed cerium oxide.

Takita, teaches incorporating self-extinguishing silicone rubber compositions formed from a platinum compound, iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ) and polyorganosiloxane compositions, into various articles needing flame resistant and self-extinguishing properties. See, e.g., pages 3-5.

Given the above teachings, we concur with the examiner that it would have been *prima facie* obvious to employ the flame retarding agents disclosed in either Takita or Matsushita in polyorganosiloxane compositions, such as the claimed polyorganosiloxane composition D, to arrive at the claimed nonflammable or self-extinguishing silicone rubber composition and incorporate the effective amount to the silicone rubber composition into various articles needing flame resistant and self-extinguishing properties. One of ordinary skill in the art, armed with the knowledge provided by Takita or Matsushita, would have been led to the claimed composition and method for forming an article containing the claimed composition, motivated by a reasonable expectation of successfully enhancing the flame resistant and/or self-extinguishing properties of silicone rubber compositions and the articles formed therefrom.

The appellant argues that Takita does not employ the claimed polyorganosiloxane compositions in its Examples. See the Reply

Brief, pages 2-3. However, we do not read Takita as being limited to its examples. *In re Lamberti*, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976) ("[A]ll disclosures of the prior art, including unpreferred embodiments, must be considered"). When Takita is viewed in its entirety as we must, we find that Takita would have suggested adding its flame retarding agents to certain polyorganosiloxane compositions inclusive of that claimed. As found by the examiner (Answer, page 3) and indicated *supra*, Takita specifically identifies the claimed polyorganosiloxane compositions.

The appellant argues that Takita includes an additional component, such as a particular azo-organic compound, not recited in claims 1 and 11. See the Reply Brief, page 3. However, claims 1 and 11, by virtue of using the term "comprising" in their preambles, permit the inclusion of other steps or materials not recited therein. *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA 1981) ("As long as one of the monomers in the reaction is propylene, any other monomers may be present, because the term 'comprises' permits the *inclusion* of other steps, elements or materials").

The appellant argues that Matsushita teaches away from using a mixture of a platinum compound and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ) to



enhance the self-extinguishing (flame retardant) property of its silicone rubber composition. See the Brief, page 15, and the Reply Brief, pages 7-8. We do not agree.

As is apparent from viewing both Matsushita and Hatanaka *in toto*, they would have suggested that a mixture of a platinum compound and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ), although less preferred, is very useful for enhancing the self-extinguishing (flame retardant) property of the silicone rubber composition of the type suggested in Matsushita. See Matsushita, column 6, Table 1, and Hatanaka, pages 10 and 12-23. As acknowledged by the appellant in citing *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994), "a known or obvious material does not become unpatentable simply because the art describe[s] it as somewhat inferior." See the Reply Brief, page 7.

The appellant argues that Takita and Matsushita would not have suggested using an effective amount of its nonflammable rubber compositions for enhancing arc-tracking and arc-erosion resistant properties of an article. See the Brief, page 8 and the Reply Brief, pages 4 and 8. We do not agree.

As indicated *supra*, the expression "arc-tracking and arc-erosion resistant properties" defined by the appellant includes the flame resistant property taught by Takita and Matsushita.

*Intellical, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387, 21 USPQ2d 1383, 1386 (Fed. Cir. 1992) (technical terms in a claim are given their ordinary meaning as would have been given by those of ordinary skill in the art unless it is apparent from the specification that the inventor used the term with a different meaning); *Locite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 867, 228 USPQ 90, 93 (Fed. Cir. 1985) (an applicant can be his own lexicographer and define unfamiliar terms in the specification). As such, we determine that Takita or Matsushita would have suggested using an effective amount of its silicone rubber composition for enhancing the "arc-tracking and arc-erosion resistant properties" of an article.

The appellant argues that the claimed invention imparts unexpected results, thereby rebutting any *prima facie* case established by the examiner. See the Brief, pages 9-10 and 18-19 and the Reply Brief, pages 4 and 8. In support of this argument, the appellant refers to the showing in the specification, i.e., Tables I and II at pages 27 and 34 of the specification. See the Brief, pages 9-10 and 18-19. The appellant, however, fails to carry his burden of showing unexpected results. *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972) ("the burden of showing unexpected results rests on the party who asserts them");

*In re Heyna*, 360 F.2d 222, 228, 149 USPQ 692, 697 (CCPA 1966) ("[i]t is incumbent upon appellant[] to submit clear and convincing evidence to support their allegation of unexpected property").

We find that the appellant's showing of alleged unexpected results is not based on a comparison between the claimed invention and the closest prior art, i.e., the exemplified embodiments of Takita and Matsushita. *In re Baxter Travenol Labs*, 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991); *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984). The appellant compares silicone rubber compositions having two flame retarding agents, i.e., a platinum complex and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ), with silicone rubber compositions having a single flame retarding agent, a platinum complex. Both Takita and Matsushita disclose silicone rubber compositions containing the claimed amounts of a platinum complex and cerium oxide, or a platinum complex and iron oxide which are the combination of flame retarding agents recited in claims 1 and 11.

We find that the appellant's showing of alleged unexpected results is not commensurate with the degree of protection sought by claims 1 and 11. *In re Clemens*, 622 F.2d 1029, 1035, 206 USPQ 289, 296 (CCPA 1980). While the showing is limited to employing

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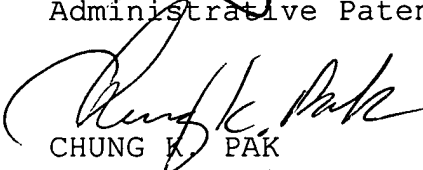

a platinum complex and iron oxide ( $\text{FeO} \cdot \text{Fe}_2\text{O}_3$ ) in a particular polyorganosiloxane composition, claims 1 and 11 are not so limited. The appellant has not demonstrated that the results applicable to these exemplified silicone rubber compositions are applicable to those silicone rubber compositions containing materially different polyorganosiloxane compositions and flame retarding agents not exemplified, but encompassed by claims 1 and 11.

Thus, based on the totality of record, including due consideration of the appellant's arguments and evidence, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of 35 U.S.C. § 103. Hence, we affirm the examiner's decision rejecting all the appealed claims under 35 U.S.C. § 103.

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No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 CFR  
§ 1.136(a).

*AFFIRMED*

  
BRADLEY R. GARRIS )  
Administrative Patent Judge )  
  
CHUNG K. PAK )  
Administrative Patent Judge )  
  
ROMULO H. DELMENDO )  
Administrative Patent Judge )

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